WHAT IS CLAIMED IS:

1. A scanning microscope comprising: a light source that emits an illuminating light beam, for illumination of a sample, that extends along an illumination beam path and can be guided over and/or through the sample using a beam deflection device; a detector that receives detection light, proceeding from the sample, that extends along a detection beam path; a light source that emits a manipulating light beam; and a mirror which can be introduced in guided fashion into the illumination beam path, whereby the mirror directs the manipulating light beam via the beam deflection device onto the sample.

2. The scanning microscope as defined in Claim 1, wherein the mirror is a hinged mirror.

3. The scanning microscope as defined in Claim 1, wherein the mirror is motor-driven.

4. The scanning microscope as defined in Claim 3, wherein the mirror is motor-driven using a galvanometer.

5. The scanning microscope as defined in Claim 1, wherein the illuminating light beam can be interrupted by the mirror.

6. The scanning microscope as defined in Claim 1, wherein the manipulating light beam can be guided over and/or through the sample using the beam deflection device.

7. The scanning microscope as defined in Claim 1, wherein the mirror has a metal coating.

8. The scanning microscope as defined in Claim 1, wherein the mirror is at least partially transparent to the illuminating light beam.

9. The scanning microscope as defined in Claim 8, wherein the illuminating light beam and the manipulating light beam can be guided together over and/or through the sample.

10. The scanning microscope as defined in Claim 1, wherein the illuminating light beam can be guided on a scanning track over and/or through the sample.

11. The scanning microscope as defined in Claim 10, wherein the manipulating light beam can be guided on the scanning track over and/or through the sample.

12. The scanning microscope as defined in Claim 11, wherein the manipulating light beam precedes the illuminating light beam on the scanning track.

13. The scanning microscope as defined in Claim 11, wherein the scanning track is largely meander-shaped or sinusoidal.

14. The scanning microscope as defined in Claim 1, wherein the manipulating light beam at least partially bleaches the sample.

15. The scanning microscope as defined in Claim 1, wherein the manipulating light beam cuts the sample.

16. The scanning microscope as defined in Claim 1, wherein the manipulating light beam acts as an optical tweezers.

17. The scanning microscope as defined in Claim 1, wherein the scanning microscope is a confocal scanning microscope.